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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/560,504	12/13/2005	Takamitsu Saito	040302-0532	5658
22428 7590 05/07/2010 FOLEY AND LARDNER LLP SUITE 500 3000 K STREET NW WASHINGTON, DC 20007				
EXAMINER				
ARCERO, ADAM A				
ART UNIT		PAPER NUMBER		
1795				
MAIL DATE		DELIVERY MODE		
05/07/2010		PAPER		

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/560,504

Applicant(s)

SAITO ET AL.

Examiner

ADAM A. ARCIERO

Art Unit

1795

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 22 March 2010.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-21 is/are pending in the application.
- 4a) Of the above claim(s) 1-13 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 14-21 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SI/200)
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date: _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____
- Paper No(s)/Mail Date: _____

**METHOD OF MANUFACTURING SECONDARY BATTERY ELECTRODE,
APPARTUS FOR MANUFACTURING THE SAME AND SECONDARY BATTERY
ELECTRODE**

Examiner Adam Arciero S.N. 10/560,504 Art Unit 1795 May 3, 2010

DETAILED ACTION

1. The Applicant's amendment filed on March 22, 2010 was received. Claims 18-20 have been amended. Claim 21 is newly added.
2. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claim Rejections - 35 USC § 112

3. The claim rejections under 35 U.S.C. 112, second paragraph, claims 18-20 as being indefinite, are withdrawn because the claims have been amended.

Claim Rejections - 35 USC §103

4. The claim rejections under 35 U.S.C. 103(a) as being unpatentable over Ochoa et al. and Miyazaki on claims 14-17 are maintained. The rejections are repeated below for convenience. Newly added claim 21 is rejected under the previous grounds of rejection.

As to Claims 14 and 17, OCHOA et al. discloses a secondary battery electrode comprising a current collector (col. 2, lines 48-65) and wherein the electrode layer is formed on said current collector and includes two kinds (plurality) of active materials (col. 2, lines 48-65).

OCHOA et al. does not specifically disclose wherein the electrode layer is structured such that graphics associated with the plurality of kinds of active materials, respectively, are located on discrete areas of the current collector.

However, MIYAZAKI teaches of a nozzle coating device (ink-jet printing) used to apply an electrode layer to a current collector (Abstract). MIYAZAKI further teaches that by using such a method, one can reduce the loss of the active material by coating only a required region of the current collector (discrete areas). At the time of the invention, it would have been obvious to one of ordinary skill in the art to modify the electrode layer of OCHOA et al. by forming said electrode layers via ink-jet printing, because MIYAZAKI teaches that a current collector can be accurately coated in a pattern at a high speed, the loss of the expensive active material is reduced (Abstract).

As to Claim 15, the electrode layers of OCHOA et al. formed by the method of MIYAZAKI are structured such that the graphics associated with the plurality of kinds of active materials, respectively, are regularly and periodically located on the current collector. MIYAZAKI teaches that the electrode layers formed by an ink-jet method are accurately coated in a pattern at a high speed (regularly and periodically).

As to Claim 16, OCHOA et al. discloses two different kinds of active materials (col. 2, lines 48-65) and said two kinds of active materials have different electrical characteristics.

As to Claim 21, discloses two different kinds of active materials (col. 2, lines 48-65) and said two kinds of active materials have different electrical characteristics and different compositions (col. 5, lines 4-15).

5. The claim rejections under 35 U.S.C. 103(a) as being unpatentable over Ochoa et al., Miyazaki and Watanabe et al. on claims 18-20 are maintained.

As to Claims 18 and 20, OCHOA et al. and MIYAZAKI does not specifically disclose wherein the secondary battery is connected to at least one other secondary battery in series, in parallel, or in a combination of series and parallel to form a battery unit.

However, WATANABE et al. teaches of a plurality of secondary battery cells connected in series to form a battery unit (pg. 3, [0054]). At the time of the invention, it would have been obvious to one of ordinary skill in the art to form a battery unit with the battery of OCHOA et al. and MIYAZAKI by connecting said battery with at least another battery in series, because WATANABE et al. teaches that a much higher voltage can be obtained and can therefore be used in applications of electric and fuel cell vehicles (pg. 1, [0006]).

As to Claim 19, WATANABE et al. further teaches connecting battery units to other battery units in series or in parallel to form a larger combined battery that is more compact (pg. 4, [0066]-[0067] and Fig. 7a). At the time of the invention, it would have been obvious to one of ordinary skill in the art to form a battery unit with the battery of OCHOA et al. and MIYAZAKI by connecting said battery unit with at least another battery unit in series and/or parallel, because WATANABE et al. teaches that a much higher voltage can be obtained and can therefore be used in applications of electric and fuel cell vehicles (pg. 1, [0006]).

Response to Arguments

6. Applicant's arguments filed March 22, 2010 have been fully considered and are not found to be persuasive.

Applicant's principal arguments are:

a) Ochoa does not disclose a plurality of kinds of active materials that are different in electrical characteristics, but rather just different particle sizes (claim 1).

In response to Applicant's arguments, please consider the following comments.

a) Ochoa et al. discloses two different kinds of active materials with different particle sizes as well as different compositions/materials/electrical characteristics (col. 5, lines 4-15).

Conclusion

7. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to ADAM A. ARCIERO whose telephone number is (571)270-5116. The examiner can normally be reached on Monday to Friday 8am to 5pm EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dah-Wei Yuan can be reached on 571-272-1295. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

AA

/Dah-Wei D. Yuan/
Supervisory Patent Examiner, Art Unit 1795